

REMARKS

Amendments

With this response, the Applicants amend claims 2 - 4 and 7 - 12 and cancel claims 1, 5, and 6. All amendments are supported by the application and claims as originally filed. For example, support for the amendment “*absolute value of said integer p and absolute value of said integer q are integers which ~~is not a small integer~~ are greater than or equal to 2650*” can be found on page 27, lines 4-8. The Applicants retain the right to reintroduce cancelled subject matter at a later date. All amendments are made without prejudice.

Claim Rejections – 35 USC § 112 – 1st Paragraph

The Examiner rejects claims 3, 4, 8, 9, 11, and 12 failing to comply with the enablement requirement. Specifically, the Examiner states that one skilled in the art cannot calculate Cover(Last) and SCover(LM) without resorting to undue experimentation. The Applicants respectfully disagree.

The explanation begins with the meaning of Dmax(Lact) and Dmin(Lact). In the disclosure, the maximum value Dmax of the distance between sub-pixel tracks (i.e. the distance between sub-pixel components), which represents the vertical distance of adjacent sub-pixel components on tracks, is expressed by a function Dmax(Lact) of a one-dimensional moving distance Lact. The minimum value Dmin of the distance between sub-pixel tracks is expressed by a function Dmin(Lact) of the moving distance Lact.

As disclosed in the description as filed (see paragraph 74), Dmax(Lact) and Dmin(Lact) can be calculated by a simple numerical calculation algorithm as shown in FIG.9.

Therefore, it is possible to calculate Dmax(Lact) by using the function delta_max(p,q,Lact) of FIG.9 and calculate Dmin(Lact) by using the function delta_min(p,q,Lact) of FIG.9.

The arguments of the function delta_max(p,q,Lact), (i.e. the input of the function delta_max(p,q,Lact)) are p (an integer), q (an integer) and lact (an integer).

With respect to an internal variable n in the function $\text{delta_max}(p,q,\text{Lact})$ that is nonpublic to external, from $n=0$ to $n=\text{Lact}-1$, the fractional portion of $q \times n/p$ is substituted to an internal array B. The internal array B is sorted in order of size. The sorted internal array B is set as an internal array C. As the element of the biggest subscript Lact of the internal array C, an element of value 1 is added.

With respect to the internal variable n in the function $\text{delta_max}(p,q,\text{Lact})$, from $n=0$ to $n=\text{Lact}-1$, the difference between adjacent elements of the internal array C is set as the element of a new internal array dB. The internal array dB is sorted in order of size. The sorted internal array dB is set as an internal array dC. The element of the biggest subscript Lact of the internal array dC, is output as the return value of the function $\text{delta_max}(p,q,\text{Lact})$.

Therefore, the return value of the function $\text{delta_max}(p,q,\text{Lact})$ is the value of $D_{\text{max}}(\text{Lact})$.

The arguments of the function $\text{delta_min}(p,q,\text{Lact})$, (i.e. the input of the function $\text{delta_min}(p,q,\text{Lact})$) are p (an integer), q (an integer) and lact (an integer).

With respect to an internal variable n in the function $\text{delta_min}(p,q,\text{Lact})$ that is nonpublic to external, from $n=0$ to $n=\text{Lact}-1$, the fractional portion of $q \times n/p$ is substituted to an internal array B. The internal array B is sorted in order of size. The sorted internal array B is set as an internal array C. As the element of the biggest subscript Lact of the internal array C, an element of value 1 is added.

With respect to the internal variable n in the function $\text{delta_min}(p,q,\text{Lact})$, from $n=0$ to $n=\text{Lact}-1$, the difference between adjacent elements of the internal array C is set as the element of a new internal array dB. The internal array dB is sorted in order of size. The sorted internal array dB is set as an internal array dC. The element of the smallest subscript 0 of the internal array dC, is output as the return value of the function $\text{delta_min}(p,q,\text{Lact})$.

Therefore, the return value of the function $\text{delta_min}(p,q,\text{Lact})$ is the value of $\text{Dmin}(\text{Lact})$.

As described above, it is clear that one skilled in the art can calculate $\text{Dmax}(\text{Lact})$ and $\text{Dmin}(\text{Lact})$ without undue experimentation by using functions $\text{delta_max}(p,q,\text{Lact})$ and $\text{delta_min}(p,q,\text{Lact})$.

Finally, based on the calculated $\text{Dmax}(\text{Lact})$ and $\text{Dmin}(\text{Lact})$, by using Equation 5 and Equation 6, it is possible to calculate $\text{Cover}(\text{Lact})$ and $\text{SCover}(\text{LM})$

The above shows that, using the disclosure, one skilled in the art can practice the claims without undue experimentation. The Applicants respectfully request that the enablement rejection be withdrawn.

Claim Rejections – 35 USC § 112 – 2nd Paragraph

The Examiner rejects claim 2 as being indefinite for using the term “not small.” The Applicants have amended the claims to replace the term with the definite term “greater than or equal to 2650” which is definite and supported by the application as filed.

The Examiner rejects claims 5, 6 and 7-12 as indefinite for omitting essential structural cooperative relationships of elements (primarily due to conflicts with the claim the claims depend upon). The Applicants have cancelled claims 5 and 6 and amended claims 7-12 to be independent claims. The Applicants assert that claims 7-12 comply with 35 USC § 112 as amended.

The Applicants respectfully request that the indefiniteness rejections be withdrawn.

Claim Rejections – 35 USC § 103

The Examiner rejects claims 1, 2, 5, and 7 as being obvious over Suzuki in view of Oldham. The Examiner also rejects claims 6 and 10 as being obvious over Suzuki in view of Oldham and in further view of Wallerstein.

Claims 1, 5, and 6 have been cancelled; therefore, the rejection against those claims is moot.

With respect to claims 2, 7, and 10: those claims contain the feature “*absolute value of said integer p and absolute value of said integer q are integers equal to or greater than 2650*” which is not taught or suggested by Suzuki, Oldham, or Wallerstein. The prior art disclosures teach examples of p and q much lower than 2650 (see column 2, lines 32-33 of Oldham, for example).

For at least the above reason, the Applicants respectfully request that the obviousness rejection be withdrawn.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

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